

The Angiosperm Flora of Singapore Part 4

SCHISANDRACEAE

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Kadsura Juss.

Ann. Mus. Hist. nat. 16 (1810) 340; Ridl., Fl. Malay Penins. 1 (1922) 20; A.C.Sm., Sargentia 7 (1947) 156; Backer & Bakh.f., Fl. Java 1(1963) 99; R.M.K. Saunders, Fl. Males. 1:13 (1997) 190; Syst. Bot. Monogr. (in press).

Sarcocarpon Blume

Woody, monoecious lianes. *Leaves* simple, alternate; exstipulate; lamina elliptic to ovate, papyraceous to coriaceous, apex acute or acuminate, margins denticulate to entire, base cuneate (especially when young), obtuse or truncate; petioles grooved adaxially. *Flowers* unisexual; in axils of leaves or fugaceous bracts, generally solitary, occasionally with a secondary flower growing in the axil of the prophyll, or in clusters of 2-4 forming glomerules, occasionally cauliflorous; tepals 7-24, imbricate at anthesis, suborbicular, elliptic or ovate, rarely obovate, outermost and innermost tepals \pm reduced, inner and middle tepals white, cream, yellow, pink or red, outer tepals often green; stamens 13-80, either essentially free but connate at the base of the filaments (occasionally with subulate appendages at the distal apex of the receptacle), or else stamens aggregated into a compact subglobose head with very broad connectives; pollen hexacolpate, distally syncolpate; carpels 17-300, free; ovaries with 2-5(-11) pendulous or ventrally attached ovules. *Fruit* a subglobose aggregate of berries attached to an ellipsoid or clavate receptacle; berries ripening red or yellow. *Seeds* 1-4(-11) per berry, smooth, hilum lateral or apical.

Distribution - There are 16 species in *Kadsura*, with a southern Chinese and Indo-Chinese centre of distribution, extending from southern Japan in the north-east, to Sulawesi and Java in the south-east, and Sri Lanka in the west (Smith, 1947; Saunders, in press). Only *K. scandens* is found in Singapore.

Ecology - Scrambling and twining woody vines of warm and subtropical broad-leaved forests, with some species extending into humid montane forests of up to 2400 m altitude.

Uses - See under *K. scandens*.

Notes - The most recent monograph of *Kadsura* is by Saunders (in press). A detailed review of the palynology of the family has been published by Praglowski (1976).



Fig. 1. *Kadsura scandens* (Blume) Blume. a. Flowering branch. b. Female flower with perianth removed, showing gynoecium. c. Isolated carpel (lateral view). d. Male flower with perianth removed, showing androecium. e. Isolated stamen (lateral view). f. Fruit. g. Seed. [a. H.N. Ridley 6354 (SING); b.-c. M. Nur 26103 (SING); d.-e. P.W. Korthals s.n. (L); f. redrawn from van Steenis (1972: fig. 29.3); g. N. Wirawan 134 (L)]. Del. H.L. Wilks. (Reproduced with permission from *Flora Malesiana* 13).

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References

- Burkill, I.H. (1966). *A Dictionary of the Economic Products of the Malay Peninsula*. Vol. 2. Ministry of Agriculture and Co-operatives; Kuala Lumpur; 1296.
- Perry, L.M. (1980). *Medicinal Plants of East and Southeast Asia: Attributed Properties and Uses*. MIT Press; Cambridge, Massachusetts; 382.
- Praglowksi, J. (1976). Schisandraceae Bl. *World Pollen and Spore Flora* 5, 1-32.
- Rao, H.S. (1939). Cuticular studies of Magnoliales. *Proc. Indian Acad. Sci.* B:9, 99-116, pl. 4-21.
- Saunders, R.M.K. (In press). A monograph of *Kadsura* (Schisandraceae). *Syst. Bot. Monogr.*
- Smith, A.C. (1947). The families Illiciaceae and Schisandraceae. *Sargentia* 7, 1-224.
- Steenis, C.G.G.J. van (1972). *The Mountain Flora of Java*. Brill; Leiden.
- Wodehouse, R.P. (1959). *Pollen Grains: Their Identification and Significance in Science and Medicine*. Hafner; New York; 340.